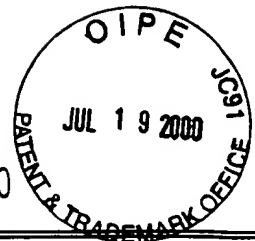


RECEIVED

JUN 05 2002

TECH CENTER 1600/2900



SHEET 1 OF 8

# INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)

ATTY. DOCKET NO.  
114232.109

SERIAL NO.  
09/518,076

APPLICANT  
Leland SHAPIRO

FILING DATE  
March 3, 2000

GROUP  
1614

## U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS		PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
[Handwritten Initials]	AA	5,750,506	5/12/98	Goodfellow et al.	[Handwritten Class]	[Handwritten Subclass]	
	AB	5,635,593	6/3/97	Cheronis et al.			
	AC	5,663,416	9/2/97	Kirschenheuter et al.			
	AD	5,700,779	12/23/97	Goodfellow et al.			
	AE	5,801,148	9/1/98	Gyorkos et al.			
	AF	5,240,956	8/31/93	Kirschenheuter et al.			
	AG	5,216,022	6/1/93	Oleksyszyn et al.			
	AH	5,281,617	1/25/94	Kirschenheuter et al.			
	AI	5,314,910	5/24/94	Kirschenheuter et al.			
	AJ	5,214,191	5/25/93	Kirschenheuter et al.			
	AK	5,610,140	3/11/97	Goodfellow et al.			
	AL	5,416,191	5/16/95	Cheronis et al.			
	AM	5,618,792	4/8/97	Gyorkos et al.			
	AN	5,486,470	1/23/96	Darke et al.			
	AO	5,478,727	12/26/95	Roizman et al.			
	AP	5,807,829	9/15/98	Gyorkos et al.			
	AQ	5,811,241	9/22/98	Goodfellow et al.			
	AR	5,834,431	11/10/98	Stewart et al.			
	AS	5,843,900	12/1/98	Cheronis et al.			
	AT	5,849,863	12/15/98	Stewart et al.			
	AU	5,861,380	1/19/99	Gyorkos et al.			
	AV	5,863,899	1/26/99	Cheronis et al.			
	AW	5,869,455	2/9/99	Gyorkos et al.			
	AX	5,874,585	2/23/99	Gyorkos et al.			
	AY	4,788,603	11/29/88	Fujimura et al.			
	AZ	4,931,279	6/5/90	Bawa et al.			
	BA	4,668,504	5/26/87	Kahan et al.			
	BB	4,713,224	12/15/87	Tamhankar et al.			
BC	4,140,122	2/20/79	Kuhl et al.				
BD	4,383,529	5/17/83	Webster				
BE	4,051,842	10/4/977	Hazel et al.				

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.  
DC: #152119 v1 39DJ011.WPD 114232-109

RECEIVED

JUN 05 2002

TECH CENTER 1600/2900



SHEET 2 OF 8

<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)</b>				ATTY. DOCKET NO. 114232.109		SERIAL NO. 09/518,076	
				APPLICANT Leland SHAPIRO			
				FILING DATE March 3, 2000		GROUP 1614	
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS		PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	BF	5,532,215	7/2/96	Lezdey et al.			
	BG	4,829,052	5/9/89	Glover et al.			
	BH	5,157,019	10/23/92	Glover et al.			
	BI	5,420,110	5/30/95	Miller et al.			
	BJ	4,963,654	10/16/90	Katunuma			
	BK	5,891,852	4/6/99	Gyorkos et al.			
	BL	5,478,727	12/26/95	Roizman et al.			
	BM	5,801,148	9/1/148	Gyorkos et al.			
	BN	5,614,555	3/25/97	Nakai et al.			
	BO	5,622,984	4/22/97	Nakai et al.			
	BP	5,077,428	12/31/91	Imaki et al.			
	BQ	4,843,094	6/27/89	Imaki et al.			
	BR	5,004,612	4/2/91	Kim et al.			
	BS	4,283,418	8/11/81	Fuji et al.			
	BT	4,310,533	1/12/82	Uegai et al.			
	BU	4,224,342	9/23/80	Fujii et al.			
	BW	4,021,472	5/3/77	Fujii et al.			
	BX	5,432,178	7/11/95	Nakai et al.			
	BY	5,247,084	9/21/93	Imaki et al.			
	BZ	5,514,653	5/7/96	Perlmutter			
	CA	5,175,253	12/29/92	Fallon et al.			
	CB	5,747,645	6/6/98	Sprecher			
	CD	5,712,117	1/27/98	Sprecher			
	CE	5,710,026	1/20/98	Sprecher			
	CF	5,798,442	8/25/98	Gallant et al.			
	CG	5,874,424	2/23/99	Batchelor et al.			
	CH	5,759,548	6/2/98	Bathurst et al.			
	CI	5,376,655	12/27/94	Imaki et al.			
CJ	4,889,723	12/26/89	Kim et al.				
CK	5,110,602	5/5/92	Kim et al.				
CL	5,514,713	5/7/96	Nakai et al.				
EXAMINER 				DATE CONSIDERED 7/1/99			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant. DC: #152119 v1 39DJ011.WPD 114232-109

# RECEIVED

JUN 05 2002



SHEET 3 OF 8

<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)</b>					TECH. CENTER 1000/2900 ATTY. DOCKET NO. 114232.109		SERIAL NO. 09/518,076	
					APPLICANT Leland SHAPIRO			
					FILING DATE March 3, 2000		GROUP 1614	
U.S. PATENT DOCUMENTS								
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE		
	CM	5,470,970	11/28/95	Saeger et al.				
	CN	4,629,567	12/16/86	Bollen et al.				
	CO	4,760,130	7/26/88	Thompson et al.				
	CP	5,616,693	4/1/97	Hwang et al.				
	CQ	5,610,285	3/11/97	Lebing et al.				
	CR	4,711,848	12/8/87	Insley et al.				
	CS	5,399,346	3/21/95	Anderson et al.				
	CT							
	CU							
	CV							
CW								
CX								
CW								
CZ								
DA								
DB								
DC								
DD								
DE								
DF								
DG								
DH								
DI								
DJ								
DK								
DL								
DM								
DN								
DO								
DP								
DQ								
EXAMINER 					DATE CONSIDERED 11/30/03			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.  
 DC: #152119 v1 39DJ011.WPD 114232-109

# RECEIVED

JUN 05 2002



SHEET 4 OF 8

TECH CENTER 1600/2900

<h2>INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)</h2>				ATTY. DOCKET NO. 114232.109		SERIAL NO. 09/518,076		
				APPLICANT Leland SHAPIRO				
				FILING DATE March 3, 2000		GROUP 1614		
FOREIGN PATENT DOCUMENTS								
EXAMINER'S INITIALS		PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							Yes	No
✓	DR	WO 97/10222	3/20/97	PCT				
✓	DS	WO 97/09346	3/13/97	PCT				
✓	DT	WO 97/09347	3/13/97	PCT				
✓	DU	WO 98/06417	2/19/98	PCT				
✓	DV	WO 98/24806	6/11/98	PCT				
✓	DW	WO 98/46597	10/22/98	PCT				
✓	DX	WO 98/49190	11/5/98	PCT				
✓	DY	WO 97/21690	6/19/97	PCT				
✓	DZ	WO 98/23565	6/4/98	PCT				
✓	EA	WO 98/50342	11/12/98	PCT				
✓	EB	WO 98/50420	11/12/98	PCT				
✓	ED	WO 97/10231	3/20/97	PCT				
✓	EE	WO 97/03679	2/6/97	PCT				
✓	EF	WO 98/22619	5/28/98	PCT				
✓	EG	WO 98/21186	5/22/98	PCT				
✓	EH	WO 97/45402	12/4/97	PCT			Abstr.	
✓	EI	WO 98/56821	12/17/98	PCT				
✓	EJ	WO 98/22098	5/28/98	PCT				
✓	EK	WO 97/48706	12/24/97	PCT				
✓	EL	WO 97/33996	9/18/97	PCT				
✓	EM	WO 98/20034	5/14/98	PCT				
✓	EN	WO 98/46597	10/22/98	PCT				
✓	EO	WO 97/24339	7/10/97	PCT			Abstr.	
	EP	WO 97/37969	10/16/97	PCT			Abstr.	
✓	EQ	WO98/09206	3/5/98	PCT				
✓	ER	WO98/23565	6/4/98	PCT				
	ES							
	ET							
	EU							
	EV							
	EW							
EXAMINER <i>[Signature]</i>				DATE CONSIDERED <i>4/30/03</i>				

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant. DC: #152119 v1 39DJ011.WPD 114232-109

RECEIVED

JUN 05 2002



SHEET 5 OF 8

TECH CENTER 1600/2900

<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)</b>		ATTY. DOCKET NO. 114232.109	SERIAL NO. 09/518,076
		APPLICANT Leland SHAPIRO	
		FILING DATE March 3, 2000	GROUP 1614
OTHER ART. (Including Author, Title, Date, Pertinent Pages, Etc.)			
MA	EX	Flaitz CM et al., "Molecular piracy: the viral link to carcinogenesis", <i>Oral Oncol</i> <b>1998</b> , 34(6):448-53.	
	EY	DiIanni CL et al., "Identification of the herpes simplex virus-1 protease cleavage sites by direct sequence analysis of autoproteolytic cleavage products.", <i>J. Biol Chem</i> , <b>1993</b> , 268(3):2048-51.	
	EZ	DiIanni CL et al., "Identification of the serine residue at the active site of the herpes simplex virus type 1 protease", <i>J Biol Chem</i> , <b>1994</b> , 269(17):12672-6.	
	FA	Pellegrini A. et al. "Identification of an aprotinin antiviral domain", <i>FEBS Lett</i> , <b>1994</b> , 344(2-3):261-5.	
	FB	Bjorck L. et al., "Cystatin C, a human proteinase inhibitor, blocks replication of herpes simplex virus", <i>J Virol</i> , <b>1990</b> , 64(2):941-3.	
	FC	Aoki H. et al., "Antiviral effect of oryzacystatin, a proteinase inhibitor in rice, against herpes simplex virus type 1 in vitro and in vivo" <i>Antimicrob Agents Chemother</i> , <b>1995</b> , 39(4):846-9.	
	FD	Holwerda BC., "Herpesvirus proteases: targets for novel antiviral drugs", <i>Antiviral Res</i> , <b>1997</b> , 35(1):1-21.	
	FE	Szeghy G. et al., "On the therapy of herpes simplex keratitis with heparin and trypsin", [Article in German] <i>Klin Monatsbl Augenheilkd</i> , <b>1968</b> ;153(6):827-30.	
	FG	Zhirnov O.P. et al., "Antiviral activity of proteinase inhibitors in cultured cells infected with alpha-viruses", <i>Mol Gen Mikrobiol Virusol</i> , <b>1985</b> , (12):30-6.	
	FH	Bukrinskaia A.G., "Suppression of rotavirus SA-11 reproduction by protease inhibitors in cell culture", <i>Vopr Virusol</i> , <b>1987</b> , 32(1):71-4.	
	FI	Chesnokova N.B. et al., "Antiproteases in herpetic keratitis", <i>Metab Pediatr Syst Ophthalmol</i> , <b>1986</b> ;9(1):593-6.	
	FJ	Adelman S.F. et al., "Protease inhibitors suppress fibrinolytic activity of herpesvirus-transformed cells", <i>J Gen Virol</i> , <b>1982</b> , 60(Pt 1):15-24.	
	FK	Chesnokova N.B. et al., "Main proteolytic inhibitors in ocular herpes", <i>Vopr Med Khim</i> , <b>1981</b> , 27(5):663-5.	
	FL	Sharpstone D. et al., "Faecal alpha 1 antitrypsin as a marker of gastrointestinal disease in HIV antibody positive individuals", <i>Gut</i> , <b>1996</b> , 38(2):206-10.	
	FM	Cordiali Fei et al., "Behavior of several 'progression markers' during the HIV-Ab seroconversion period. Comparison with later stages", <b>1992</b> , <i>J Biol Regul Homeost Agents</i> , 6(2):57-64.	
	FN	Lima et al., "Mucosal injury and disruption of intestinal barrier function in HIV-infected individuals with and without diarrhea and cryptosporidiosis in northeast Brazil", <b>1997</b> , <i>Am J Gastroenterol</i> , 92(10):1861-6.	
	FO	Banfi et al., "Tumor-associated trypsin inhibitor in induced and acquired immunodeficiency. Studies on transplanted and HIV-infected patients", <b>1991</b> , <i>Scand J Clin Lab Invest</i> 51, Suppl, 207:55-8.	
	FP	Deam et al., "Alpha 1-antitrypsin phenotypes in homosexual men", <b>1989</b> , <i>Pathology</i> , 21(2):91-2.	
	FQ	Pezzilli et al., "Serum pancreatic enzymes in HIV-seropositive patients", <i>Dig Dis Sci</i> , <b>1992</b> , 37(2):286-8.	
	FR	Tang et al., "Inactivation of HIV-1 by trypsin and its use in demonstrating specific virus infection of cells", <b>1991</b> , <i>J Virol Methods</i> , 33(1-2):39-46.	
EXAMINER		DATE CONSIDERED	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

DC: #152119 v1 39DJ011.WPD 114232-109

RECEIVED

JUN 05 2002



SHEET 6 OF 8

TECH CENTER 1600/2300

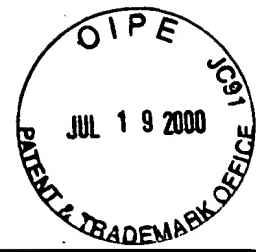
<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)</b>		ATTY. DOCKET NO. 114232.109	SERIAL NO. 09/518,076
		APPLICANT Leland SHAPIRO	
		FILING DATE March 3, 2000	GROUP 1614
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)			
	FQ	Glozman, "Immunologic foundation of enzyme therapy of patients with orchiepidymitis", 1990, <i>Antibiot. Khimioter</i> , 35(7):50-52.	
	FR	Merrifield, R.B., "Solid Phase Peptide Synthesis. I. The Synthesis of a Tetrapeptide", 1963, <i>J. Am. Chem. Soc.</i> , (85):-2149.	
	FS	Budavari, Susan (Editor), "The Merck Index", <i>An Encyclopedia of Chemicals, Drugs, and Biologicals</i> ; Merck & Co., Inc.	
	FT	Premack, B.A. et al., "Chemokine Receptors: Gateways to Inflammation and Infection", 1996, <i>Nature Medicine</i> , 2:1174-1178.	
	FU	Patel et al., "The Role of Protease During Apoptosis", 1996, <i>FASEB J</i> , 10(5):587-597.	
	FV	Estaquier J., "Fas-mediated apoptosis of CD4+ and CD8+ T cells from human immunodeficiency virus-infected persons: differential in vitro preventive effect of cytokines and protease antagonists", 1996, <i>Blood</i> , 15:87(12):4959-66.	
	FW	Shimizu T. et al., "DNA Fragmentation induced by Protease Activation in P53-null Human Leukemia HL60 Cells Undergoing Apoptosis Following Treatment with the Topoisomerase I Inhibitor Camptothecin: Cell-Free System Studies", 1996, <i>Exp Cell Res</i> , 1:226(2):292-301.	
	FX	Glynn et al., "Apoptosis Induced by HIV Infection in H9 T Cells is Blocked by ICE-Family Protease Inhibition but not by a FAS(CD95) Antagonist", 1996, <i>J. Immunol</i> , 1: 157(7):2754-2758.	
	FY	Rehman A., et al., "Scavenging of Hydroxyl Radicals but not of Peroxynitrite by Inhibitors and Substrates of Nitric Oxide Synthases", 1997, <i>Br. J. Pharmacol</i> , 122(8):1702-6.	
	FZ	Pryor W.A. et al., "Mechanisms of Cigarette Smoke Toxicity: The Inactivation of Human Alpha-1-Proteinase Inhibitor by Nitric Oxide/Isoprene Mixtures in Air", 1985, <i>Chem Biol Interact</i> , 54(2): 171:183.	
	GA	Van Molle, W. et al., "Alpha 1-Acid glycoprotein and alpha 1-antitrypsin inhibit TNF-induced but not anti-Fas-induced apoptosis of hepatocytes in mice", <i>J. Immunol</i> , 1997, 1:159(7):3555-3564.	
	GB	Bratt, J. et al., "Cytokine-induced neutrophil-mediated injury of human endothelial cells", <i>J. Immunol.</i> , 1997, 15: 159(2):912-918.	
	GC	Ooka, T., et al., "Protective effects of human urinary trypsin inhibitor against trypsin-induced relaxation in rat aorta", <i>Crit care Med</i> , 1996, 24(11): 1903-1907.	
	GD	Novradovsky, A., et al., "Endothelial Nitric Oxide Synthase as a Potential Susceptibility Gene in the Pathogenesis of Emphysema in alpha 1-Antitrypsin Deficiency", 1999, <i>Am J. Respir Cell Mol Biol</i> , 1: 20(3):441-447.	
	GE	Meki, AR, et al., "Serum-interleukin-1bet, interleukin-6, nitric oxide and alpha 1-antitrypsin in scorpion envenomed children", 1998, <i>Toxicon</i> , 36(12):1851-1859.	
	GF	Griffin et al. "The Hydrophilic-Lipophilic Balance" 1954, <i>J. Soc. Cos. Met. Chem.</i> , 5: 249.	
	GG	Scharpe et al., "Protease and their inhibitors: today and tomorrow", 1991, <i>Biochimie</i> , 73(1):121-126.	
	GH	Kido et al., "A novel membrane-bound serine esterase in human T4+ lymphocytes immunologically reactive with antibody inhibiting syncytia induced by HIV-1. Purification and characterization", <i>J Biol Chem.</i> , 1990, 265(35):21979-85.	
	GI	Brinkman et al., "Inhibition of tryptase TL2 from human T4+ lymphocytes and inhibition of HIV-1 replication of H9 cells by recombinant aprolin and bikunin homologues", 1997, <i>J. Protein Chem.</i> , 16(6):651-660.	
EXAMINER		DATE CONSIDERED	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

DC: #152119 v1 39DJ011.WPD 114232-109

RECEIVED

JUN 05 2002



SHEET 7 OF 8

TECH CENTER 1600/2900

# INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)

ATTY. DOCKET NO.  
114232.109

SERIAL NO.  
09/518,076

APPLICANT  
Leland SHAPIRO

FILING DATE  
March 3, 2000

GROUP  
1614

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	GJ	Auerswald et al., "K15R M52E) aprotinin is a weak Kunitz-type inhibitor of HIV-1 replication in H9 cells" <i>Biomed Biochim Acta</i> , 1991, 50(4-6):697-700.
	GK	Kamoshita et al., "Calcium requirement and inhibitor spectrum for intracellular HIV type 1 gp160 processing in cultured HeLa cells and CD4+ lymphocytes: similarity to those of viral envelope glycoprotein maturase", <i>J Biochem. Tokyo</i> , 1995, 117(6):1244-53.
	GL	Koito et al., "A neutralizing epitope of human immunodeficiency virus type 1 has homologous amino acid sequence with the active site of inter-alpha-trypsin inhibitor", 1989, <i>Int Immunol</i> , 1(6):613-8.
	GM	McNeely et al., "Secretory leukocyte protease inhibitor: a human saliva protein exhibiting anti-human immunodeficiency virus 1 activity in vitro", 1995, <i>J Clin Invest</i> , 96(1):456-64.
	GN	Hallenberger et al., "Inhibition of furin-mediated cleavage activation of HIV-1 glycoprotein gp160", 1992, <i>Nature</i> , 360(6402):358-61.
	GO	Vollenweider, et al., "Comparative cellular processing of the human immunodeficiency virus (HIV-1) envelope glycoprotein gp160 by the mammalian subtilisin/kexin-like convertases", 1996, <i>Biochem. J.</i> , 314 (Pt 2):521-32.
	GP	Anderson et al., "Inhibition of HIV-1 gp160-dependent membrane fusion by a furin-directed alpha 1-antitrypsin variant", 1993, <i>J Biol Chem</i> , 268(33):24887-91.
	GQ	Decroly, et al., "Identification of the paired basic convertases implicated in HIV gp160 processing based on in vitro assays and expression in CD4(+) cell lines", 1996, <i>J Biol Chem</i> , 271(48):30442-50.
	GR	Moulard, et al., "Kex2p: a model for cellular endoprotease processing human immunodeficiency virus type 1 envelope glycoprotein precursor", <i>Eur J Biochem</i> , 1994, 225(2):565-72.
	GS	Franzusoff, et al., "Biochemical and genetic definition of the cellular protease required for HIV-1 gp160 processing", 1995, <i>J Biol Chem</i> , 270(7):3154-9.
	GT	Avril, et al., "Identification of the U-937 membrane-associated proteinase interacting with the V3 loop of HIV-1 gp120 as cathepsin G", <i>FEBS Lett</i> , 1994, 345(1):81-6.
	GU	Harvima et al., "Separation and partial characterization of proteinases with substrate specificity for basic amino acids from human MOLT-4 T lymphocytes: identification of those inhibited by variable-loop-V3 peptides of HIV-1 (human immunodeficiency virus-1) envelope glycoprotein", 1993, <i>Biochem J</i> , 292 (Pt 3):711-8.
	GV	Bourinbaier, et al., "Acrosin inhibitor, 4'-acetamidophenyl 4-guanidinobenzoate, an experimental vaginal contraceptive with anti-HIV activity", <i>Contraception</i> , 1995, 51(5):319-22.
	GW	Bristow, et al., "Inhibition of HIV-1 by modification of a host membrane protease", 1995, <i>Int Immunol</i> , 7(2):239-49.
	GX	Bukrinskaia et al., "Inhibition of HIV reproduction in cultured cells using proteolysis inhibitors", 1989, <i>Vopr Virusol</i> , 34(1):53-5.
	GY	Avril et al., "Interaction between a membrane-associated serine proteinase of U-937 monocytes and peptides from the V3 loop of the human immunodeficiency virus type 1 (HIV-1) gp120 envelope glycoprotein", <i>FEBS Lett</i> , 1993, 317(1-2):167-72.
	GZ	Bourinbaier, et al., "Effect of serine protease inhibitor, N-alpha-tosyl-L-lysyl-chloromethyl ketone (TLCK), on cell-mediated and cell-free HIV-1 spread", <i>Cell Immunol</i> , 1994, 155(1):230-6.
	HA	Turpin et al., "Human immunodeficiency virus type-1 (HIV-1) replication is unaffected by human secretory leukocyte protease inhibitor", 1996, <i>Antiviral Res</i> , 29(2-3):269-77.
	HB	Kennedy et al., "Submandibular salivary proteases: lack of a role in anti-HIV activity", 1998, <i>J Dent Res</i> , 77(7):1515-9.

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant. DC: #152119 v1 39DJ011.WPD 114232-109

